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Due Date: April 10, 2004

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:

Inventor: William J. Dhimitri et al.

Serial No: 09/589,049

Filed: June 6, 2000

Title: DYNAMIC POSITIONING AND
ALIGNMENT AIDS FOR SHAPE
OBJECTS

Examiner: Motilewa Good Johnson

Group Art Unit: 2672

APPEAL NO.: _____

REPLY BRIEF OF APPELLANTS

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In accordance with 37 C.F.R. § 1.193, Appellants hereby submit their Reply Brief on Appeal from the rejection of claims 1-18 of the above-identified application, as set forth in the Examiner's Answer mailed February 10, 2004. The Reply Brief is submitted in triplicate.

Also, please charge any fees or credit any overpayments to Deposit Account No. 50-0494 of Gates & Cooper LLP.

I. Claim 5 is Not Indefinite

As stated in the Appeal Brief, the Office Action rejected claim 5 as an omnibus type claim.

Claim 5 provides:

5. (ORIGINAL) The method of claim 1, further comprising deleting the created socket when the plug of the first object is no longer proximate to the second object.

The MPEP 2173.05(r) and case law provide that specific language must exist for a claim to be considered an omnibus type claim. Specifically, the claim must define the invention entirely by reference to the specification and/or drawings. Claim 5 clearly does not even refer to the specification and drawings. Accordingly, the rejection is completely without merit.

In response to the above assertions, the Examiner's Answer provides that "The Examiner rejected claim 5 as being indefinite in that it is unclear what constitutes the proximity of the objects and furthermore at what proximity the deletion would occur."

Firstly, Appellants note that the rejection is clear in stating that claim 5 is an omnibus type claim. Accordingly, the new assertion "that it is unclear what constitutes the proximity of the objects and at what proximity the deletion would occur" is improper.

Secondly, the term "proximate" is defined in the specification as "spatially proximate". The figures (see FIG. 3A-3D) also illustrate one object being placed proximate to another object as being near to the object. In Addition, the American Heritage dictionary defines proximate as being very near or next, as in space or time:

prox·i·mate  **P Pronunciation Key** (prŏk'sə-mĭt)
adj.

1. Very near or next, as in space, time, or order. See Synonyms at close.
2. Approximate.

[Latin proxim^{us}, past participle of proxim^{are}, *to come near*, from proximus, *nearest*. See per¹ in Indo-European Roots.]

prox i·mate·ly adv.

prox i·mate·ness n.

[Download or Buy Now]

Source: *The American Heritage® Dictionary of the English Language, Fourth Edition*

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In addition to the above, Appellants note that claim 1 also provides and uses the term "proximate". However, the Examiner has only rejected claim 5 as being indefinite. Claim 5 merely reuses the term "proximate" and states that when the plug on a first object is no longer proximate, the created socket is deleted.

Taking the above into consideration, it is clear that the term "proximate" is not unclear or indefinite. Accordingly, Appellants respectfully request that the rejection be reversed.

II. The Independent Claims are Patentable Over the Cited Art

A. Arsenault Fails to Teach, Disclose, or Suggest Changing an Appearance of Plugs on an Object When the Object is Positioned Proximate to Another Object

In response to earlier submitted arguments, the Answer provides:

Arsenault discloses shape properties can be used to intelligently modify the geometry of other shapes, col. 4, lines 5-6, shape properties relate to the dynamic behavior of the shape whether it pulls or attracts another shape to it, col. 4, lines 13-17, and shape characteristics have a capability to snap in and interlock with another shape automatically, needed only when the user is manipulating the shape to establish its new position in the scene, col.4, lines 8-13. Arsenault also discloses components that interface with the shape such as a plug into or socket configuration, col. 4, lines 57-60, and that components are dynamic, col. 6, line 37.

Therefore it is the Examiner's position that Arsenault discloses changing an appearance of an object based upon the manipulation of the positioning of the object in a scene by a user and allows for the dynamic creation of components such as a socket and plug configuration to an object.

Appellants respectfully disagree with the above assertions. Firstly, the claims specifically provide for:

"(d) changing an appearance of plugs by displaying plugs on the first object when the first object is positioned proximate to the second object, wherein the plugs indicate one or more respective attachment points on the first object;"

The Answer attempts to state that Arsenault's mere ability for "one shape to modify the appearance of another shape" teaches a change in appearance to a particular element of a second object – an appearance of plugs. Such an equality is not even remotely plausible. A geometry of a shape refers to an overall structure of the shape. In this regard, modifying a geometry of a shape does not teach, implicitly or explicitly changing an appearance of plugs on a shape by displaying plugs on the shape.

In other words, Appellants submit that the claimed "plugs" are not equivalent to Arsenault's "geometry of a shape".

As quoted above, the Answer continues and states that shape properties relate to the dynamic behavior of the shape whether it pulls or attracts another shape to it. However, the cited portion of Arsenault (and the remainder of Arsenault), and the statement in the Answer does not refer or relate to altering or changing an appearance of plugs by displaying them. In this regard, Arsenault's dynamic behavior of shapes is described in the Appeal Brief and has no relation to changing an appearance of plugs when one object is moved proximate to another object.

In addition to the above, the Appeal Brief also submitted that the change in appearance has a timing aspect associated with it – i.e., when the first object is positioned proximate to the second object. Such a timing based relationship between proximity and the display of plugs is not even remotely contemplated in Arsenault – (nor is it addressed in the Answer).

B. Arsenault Fails to Teach, Disclose, or Suggest Dynamically Creating Sockets

The Answer responded to Appellants earlier arguments stating:

Arsenault defines the socket and plug configure as a component, col. 4, lines 57-59, and further discloses the components are dynamic. Applicant argues further that Arsenault's properties are store and described separately from the dynamic behavior and that the anchor component provided in Arsenault is not changed. Arsenault discloses in col. 22, lines 11-13, in the example provided the anchor component is not changed.

In response to applicant's arguments that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., appeal brief page 6, figure 4B, the movement of the socket and shape) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geem*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Appellants respectfully disagree with the above assertions. Firstly, the first statements in the Answer support Appellants conclusion. Specifically, Appellants argued that Arsenault's properties are stored and described separately from the dynamic behavior and that the anchor component provided in Arsenault is not changed. The Answer states that Arsenault discloses in col. 22, lines 11-13 that the anchor component is not changed. Such a statement provides clear support for Appellants' assertion that the anchor component is not changed and is not dynamically created in Arsenault.

The above cited portion continues and states that "features upon which Appellants relies are not recited in the rejected claim(s)". Appellants respectfully disagree. The claims specifically recite both

"plugs" and "sockets", both of which indicate attachment points between a first object and a second object. The use of the terms "plugs" and "sockets" are defined by Appellants throughout the specification (as indicated in the Appeal Brief) as having a particular meaning. In view of the above, the terms must be interpreted in light of the specification as stated in the Answer. Further, the claim language cannot merely be ignored and equated to non-similar terms in a cited reference. The use of sockets as described on page 6 of the Appeal Brief is not used nor intended to be included or incorporated in the claim language. Instead, the portions are recited merely as an example of what a socket means in light of the specification.

In addition to the above, Appellants note that dependent claims 5, 11, and 17 provide for deleting a created socket on an object when the other object is moved away from the socket. In other words, the socket is deleted when the object with the plug is moved away. Such claim language clearly supports the arguments asserted in the Appeal Brief regarding the definition of a socket. For further details, see the arguments regarding claim 5 below (and in the Appeal Brief).

Again, the claims recite plugs and sockets as attachment points. The Office Action attempts to equate such plugs and sockets with the mere positioning of a child shape. Appellants submit that the positioning of a child shape is not equivalent to the creation of a socket or creating a socket on the fly when a second shape is moved proximate to it. Such an assertion is further supported by the unique meaning and definition of a "socket" which is set forth in the specification.

C. Arsenault Fails to Teach, Disclose, or Suggest Creating a Socket When an Object is Moved Proximally to Another Object

In response to the above, the Answer provides:

It is the Examiner's position that while Arsenault may not implicitly disclose creating a socket, it is implied through dynamic creation of components, the manipulation of a user by positioning, and by intelligently knowing how to snap together objects.

Applicant argues that Arsenault fails to disclose the creation of the object when the object is moved proximate. It is well known in the art that drag and drop user manipulations operate by proximity. Furthermore, Arsenault discloses some shapes can be used to intelligently modify the shape of other shapes and shape characteristics such as a capability to snap in and interlock with another shape automatically are need with the user is manipulating the position of the shape. Col. 3, line 50-col. 4, line 26.

As noted in the Answer, the Examiner states that Arsenault does not "implicitly disclose creating a socket". If Arsenault does not disclose explicitly or implicitly the claimed element of creating

a socket, Arsenault cannot teach the invention and the invention cannot be rendered obvious by Arsenault. The Answer thus acknowledges the lack of implicit teaching by Arsenault.

Appellants acknowledge that drag and drop actions are common in the art. However, the Answer provides that drag and drop user manipulations operate by proximity. Appellants disagree. Drag and drop user manipulations operate by a user picking up an object, dragging it to a desired location, and dropping it where desired. Proximity has nothing to do with drag and drop user manipulations. It is unclear what exactly the Examiner is asserting in this regard.

The Answer then states that Arsenault discloses "some shapes can be used to intelligently modify the shape of other shapes and shape characteristics such as a capability to snap in and interlock with another shape automatically are need with the user is manipulating the position of the shape". Appellants don't understand what the Answer is attempting to assert. Appellants assume that the Answer is attempting to state that Arsenault implies the claimed creation of a socket when an object is moved proximate by Arsenault's teaching that (1) some shapes can intelligently modify the geometry of another shape (see col. 4, lines 5-6), and (2) a shape characteristic, that may only be needed when manipulating a shape to establish a new position on a screen, may include a requirement or capability to "snap in" and interlock with another shape automatically (see col. 4, lines 8-13).

With respect to (1), the modification of a geometry of a shape (by another shape) does not even remotely describe or allude to the creation of a socket when a shape is placed proximately to another object. Nowhere is there a description of a proximate location of two shapes next to each other. Nor is there a description of a creation of a socket. Instead, such a quotation merely refers to modifying the geometry of another shape. Such a suggestion does not teach the invention as claimed.

With respect to (2), a shape characteristic that may only be needed at certain times, does not even remotely contemplate when that shape characteristic is created. The claims provide for dynamically creating a socket when a plug is moved proximate to it. The cited portion does not reflect or describe, implicitly or explicitly, when the shape characteristic is created. Instead, the cited portion merely reflects when the shape characteristic is used – i.e., when manipulating a shape to establish a new position on a screen. Again, such a teaching does not even remotely describe the claimed dynamic socket creation with the timing of the creation based on the location of objects.

D. Dependent Claims 2, 8, and 14 Are Patentable Over the Cited Art

As stated in the Appcal Brief, these claims provide that the appearance of the second object changes when the types of plugs on the first object do not match the type of socket on the second object. In other words, if there is a mismatch between the plug and socket, the appearance of one of the objects may change. An advantage of such a provision includes the ability to provide an indication to the user of the plug-socket mismatch.

In responding to Appellants' earlier arguments, the Answer provides:

Arsenault discloses some shape can be used to intelligently modify the shape of other shapes and shape characteristics such as a capability to snap in and interlock with another shape automatically are need with the user is manipulating the position of the shape, col. 3, line 50-col. 4, line 26. It is therefore the Examiner's interpretation that intelligently the objects can not be joined if the objects components or connections do not match, and therefore would need to be modified to snap in and interlock automatically.

While interesting, the Examiner's point that a shape may have to be modified to snap and interlock automatically, it is not relevant with respect to the claims. Such language in Arsenault (and the remainder of Arsenault) fail to describe a mismatch between a type of plug and a type of socket as claimed. In fact, Arsenault does not even contemplate that there could be a mismatch between types of claims and sockets. Further, the claimed concept of changing an appearance of an object when there is a type mismatch is not described, disclosed, hinted at, or suggested, implicitly or explicitly, in Arsenault. Again, the concept of intelligently modifying the shape of a shape does not describe the specific claimed modification that arises when a mismatch occurs between a plug and socket.

E. Dependent Claims 4, 10, and 16 Are Patentable Over the Cited Art

These claims provide that a defined range (and not a particular point) (on a first object) is coupled to a particular attachment point (on a second object).

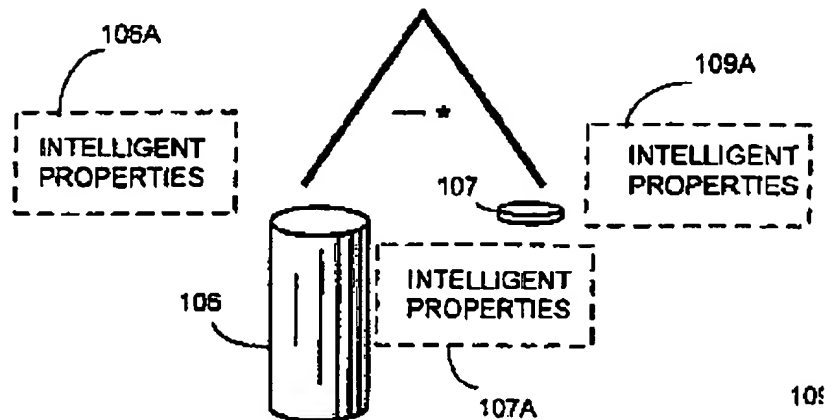
In response to the Appcal Brief, the Answer provides:

Arsenault discloses in the cited portion that the disk is snapped onto the end, which is a defined range of the first object, whenever the disk is dragged into proximity.

Appellants respectfully disagree. The cited portion of Arsenault provides:

For example, the intelligent properties 107A associated with disk 107 might, if desired, cause the disk to "snap onto" the end of cylinder 106A whenever the disk is "dragged" (using a graphical interface) into proximity with the cylinder.

The relevant portion of FIG. 3 described by this text follows:



As can be seen, 106A represents intelligent properties of cylinder 106 and 107A represents intelligent properties of disk 107. The text merely provides the ability for snapping disk 107 to cylinder 106. Whether a particular point on disk 107 attaches to a particular point on cylinder 106, or whether the disk 107 and cylinder 106 must perfectly match and all surface area points are attached is unknown. The claims provide that a range on one object is attached to a particular point on another object. Such a relationship is not disclosed, taught, or suggested. In fact, an electronic search of Arsenault for the word "range" provides no results whatsoever. Without even mentioning the word range, Arsenault cannot possibly teach attaching a single point to a defined range on an object.

In view of the above, Appellants submit that Arsenault does not define a range as claimed and that the claim is in allowable form.

F. Dependent Claims 5, 6, 11, 12, 17, and 18 Are Patentable Over the Cited Art

In the Appeal Brief, Appellants asserted that Arsenault fails to teach, disclose, or suggest the deletion of a created socket when the first object is no longer proximate to the second object or when no plugs are attached to the socket. In other words, if the object having the plug is moved away or is not plugged into the socket, the socket is deleted.

In response to arguments in the Appeal Brief, the Answer provides:

Applicant argues that Arsenault fails to disclose deleting the created socket when the plugs are attached. Arsenault discloses remove and remove all component function calls, which Examiner interprets as deleting the created component which may be performed when the object is no longer proximate and when no plugs are attached thus allowing for the creation of allowing shape properties to

be operatively interconnected or behave intelligently in response to user interaction, which is Arsenault discloses as positioning, and the intelligent shapes may provide multiple representations for a variety of purposes, and that shape characteristic such as minimum distance or a capability to snap and interlock is used in user manipulations of the position in the scene and discloses pulling and attraction of a shape by deforming the other shape, col. 3, line 50-col. 4, line 26.

Therefore it is the Examiner's position that if the shape is deformed by the attraction of another shape the deformation constitutes a change in the appearance in response to the positioning. Arsenault further discloses shape components such as a plug into and socket configuration, col. 4, lines 57-59. Arsenault discloses properties specify dynamic and can be added or removed in response to user requests, col. 5, lines 37-40. Arsenault therefore discloses changing an appearance, by deforming the shapes and dynamic creation of components, such as plug and socket, by specifying dynamic behavior and allowing the objects to be added or removed by user request or positioning....

Lastly, Applicant argues that Arsenault fails to disclose deleting the created socket when the plugs are attached. Arsenault discloses remove and remove all components function calls, which Examiner interprets as deleting the created component which may be performed when the object is no longer proximate and when no plugs are attached.

Appellants respectfully disagree with these assertions. Firstly, the Answer merely provides that the remove and remove all features may be performed when the object is no longer proximate and when no plugs are attached. However, the time when these functions may be performed are not even hinted at whatsoever in Arsenault. As far as the text of Arsenault is concerned, the "remove" and "remove all" functions could be performed at any time. However, no times are even considered or mentioned. For example, such functions could be performed when the program is exited, when a user hits the space bar, when a color of a shape is changed, when a printer is turned off, when a CD is inserted into a CD drive, etc. In this regard, the Examiner could potentially assert that Arsenault teaches each of the above actions. However, just as Arsenault fails to teach the above examples, Arsenault also fails to teach deleting a socket when an object is no longer proximate to the shape containing the socket (or when no plugs are attached to the socket). In this regard, one cannot assume that an invention is taught merely by the failure to teach anything. Such an assumption is wholly improper.

In view of the above, the present invention could potentially call the "remove" or "remove all" functions at the time specified in the claims. However, the mere existence of a function that deletes a component does not even remotely suggest or indicate a particular time that the function should or could be performed. The present claims provide such a timing aspect.

In addition to the above, the deforming of a shape also fails to suggest or imply that a socket is removed when an object is no longer proximate to the object containing the socket. Appellants refer to

the Appeal Brief that clearly sets forth how the "dynamic" actions in Arsenault are clearly differentiable from the dynamic creation of a socker as claimed.

In view of the above, Appellants submit that these dependent claims are in allowable form and respectfully requests reversal of the rejections.

III. Conclusion

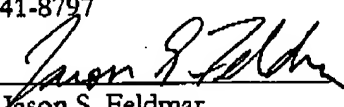
In light of the above arguments, Appellants respectfully submit that the cited references do not anticipate nor render obvious the claimed invention. More specifically, Appellants' claims recite novel physical features which patentably distinguish over any and all references under 35 U.S.C. §§ 102 and 103. As a result, a decision by the Board of Patent Appeals and Interferences reversing the Examiner and directing allowance of the pending claims in the subject application is respectfully solicited.

Respectfully submitted,

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JSF/

G&C 30566.99-US-01

APPENDIX

1. A method of displaying information on a monitor attached to a computer, comprising:
 - (a) displaying a first object on the monitor;
 - (b) displaying a second object on the monitor;
 - (c) positioning the first object proximate to the second object on the monitor;
 - (d) changing an appearance of plugs by displaying plugs on the first object when the first object is positioned proximate to the second object, wherein the plugs indicate one or more respective attachment points on the first object;
 - (e) dynamically creating a socket on the second object when the plug of the first object is placed proximate to the second object, wherein the socket indicates an attachment point between the first object and the second object; and
 - (f) automatically coupling the second object to the first object at the attachment point.
2. The method of claim 1, wherein an appearance of the displayed second object on the monitor is modified when a type of the plug on the first object does not match a type of the socket on the second object.
3. The method of claim 1, wherein the step of automatically coupling further comprises the step of positioning the first object to align the plug of the first object to the created socket of the second object.
4. The method of claim 1, wherein the step of automatically coupling further comprises the step of automatically coupling the attachment point of the second object to the first object along a defined range of the first object.
5. The method of claim 1, further comprising deleting the created socket when the plug of the first object is no longer proximate to the second object.
6. The method of claim 1, further comprising deleting the created socket when no plugs are attached to the created socket.

7. A computer-implemented apparatus for displaying information, comprising:
a computer having a monitor attached thereto, wherein the monitor displays a first object and a second object;
means for positioning the first object proximate to the second object on the monitor;
means for changing an appearance of plugs by displaying plugs on the first object when the first object is positioned proximate to the second object, wherein the plugs indicate one or more respective attachment points on the first object;
means for dynamically creating a socket on the second object when the plug of the first object is placed proximate to the second object, wherein the socket indicates an attachment point between the first object and the second object; and
means for automatically coupling the second object to the first object at the attachment point.
8. The apparatus of claim 7, wherein an appearance of the displayed second object on the monitor is modified when a type of the plug on the first object does not match a type of the socket on the second object.
9. The apparatus of claim 7, wherein the step of automatically coupling further comprises the step of positioning the first object to align the plug of the first object to the created socket of the second object.
10. The apparatus of claim 7, wherein the step of automatically coupling further comprises the step of automatically coupling the attachment point of the second object to the first object along a defined range of the first object.
11. The apparatus of claim 7, further comprising deleting the created socket when the plug of the first object is no longer proximate to the second object.
12. The apparatus of claim 7, further comprising deleting the created socket when no plugs are attached to the created socket.

13. An article of manufacture comprising a computer program carrier readable by a computer and embodying one or more instructions executable by the computer to perform method steps of displaying information on a monitor attached to the computer, the method comprising the steps of:

- (a) displaying a first object on the monitor;
- (b) displaying a second object on the monitor;
- (c) positioning the first object proximate to the second object on the monitor;
- (d) changing an appearance of plugs by displaying plugs on the first object when the first object is positioned proximate to the second object, wherein the plugs indicate one or more respective attachment points on the first object;
- (e) dynamically creating a socket on the second object when the plug of the first object is placed proximate to the second object, wherein the sockets indicates an attachment point between the first object and the second object; and
- (f) automatically coupling the second object to the first object at the attachment point.

14. The article of manufacture of claim 13, wherein an appearance of the displayed second object on the monitor is modified when a type of the plug on the first object does not match a type of the socket on the second object.

15. The article of manufacture of claim 13, wherein the step of automatically coupling further comprises the step of positioning the first object to align the plug of the first object to the created socket of the second object.

16. The article of manufacture of claim 13, wherein the step of automatically coupling further comprises the step of automatically coupling the attachment point of the second object to the first object along a defined range of the first object.

17. The article of manufacture of claim 13, further comprising deleting the created socket when the plug of the first object is no longer proximate to the second object.

18. The article of manufacture of claim 13, further comprising deleting the created socket when no plugs are attached to the created socket.